



# Creating the future smart retail

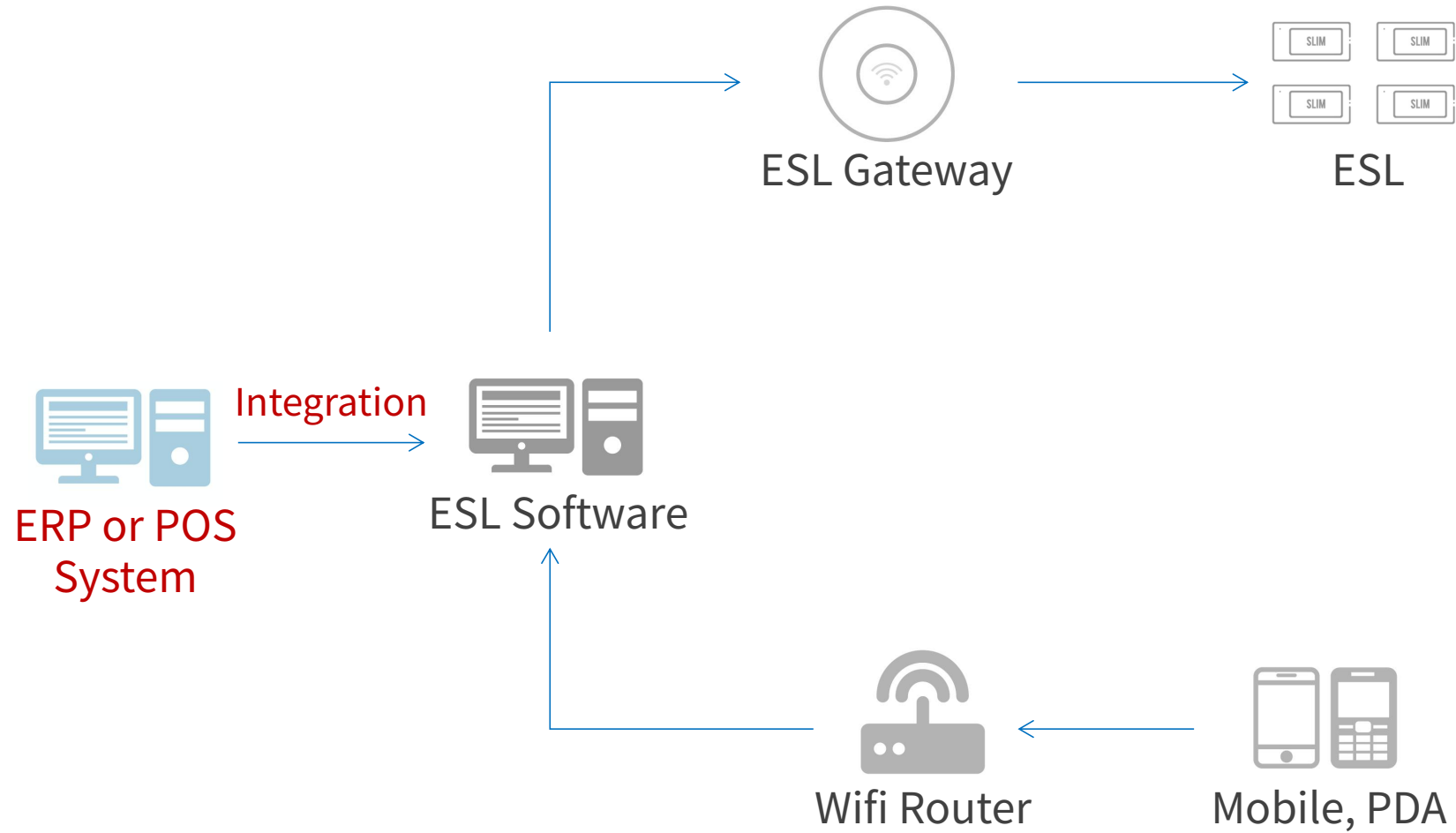
YALATECH SMART ESL SOLUTION



## **Table of Contents**

- Overview (value of our ESL)
- What makes our solution superior?
- ESL software
- System integration and deployment

# The Infrastructure of ESL System



# Value of our ESL



## Price Management

- Real-time price update
- Price synchronization
- Information synchronization



## Stock Management

- Connect with your ERP
- Online / offline information synchronization
- Automatic update on stock status



## Interactive Marketing

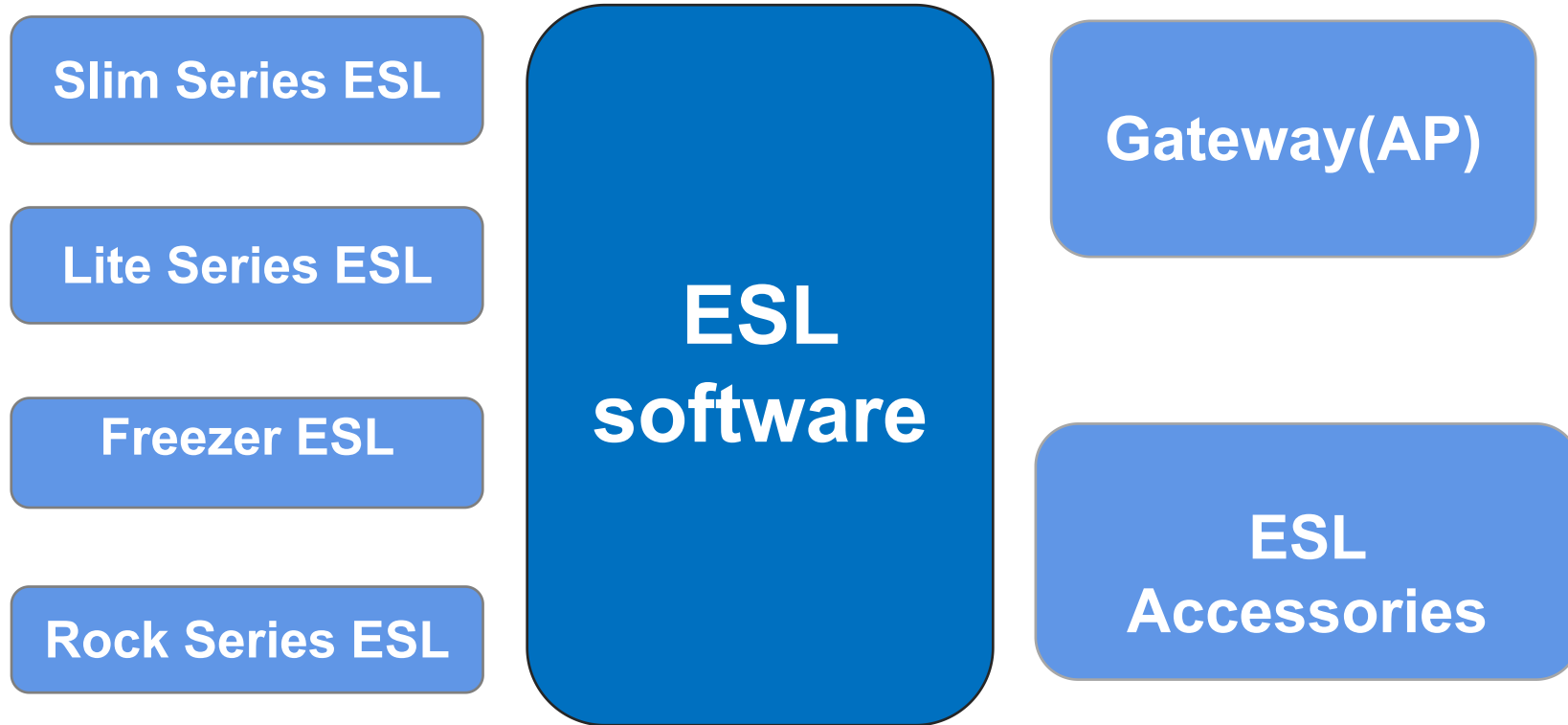
- Customized QR codes
- NFC feature(optional)



## Order Picking

- Route guidance
- Picking indicator

# Total H/S solution for you



# ESL Hardware Features

- Power-saving E-ink display technology
- Crash-proof protective display cover
- Multiple sizes: 1.54, 2.13, 2.66, 2.9, 3.45, 4.2, 5.83, 7.5, 10.2 and more
- In-mould bar code labelling for longlasting use
- 7 colors LED light
- IP67 waterproof series
- Freezer series for low temperature environment



# Lite Series ESL



- Simply design
- NFC
- Colorful cases customizable

1.54"

2.13"

2.66"

2.90"

4.2"

7.5"

# Slim Series ESL



- Slim design
- Super tough crash-proof protective cover for the display
- In-mould barcode label for long-lasting use
- 7 colors LED
- NFC

2.13"

2.66"

2.90"

4.2"

7.5"



# Freezer ESL



- Super tough crash-proof protective cover for the display
- In-mould barcode label for long-lasting use
- IP 67 waterproof
- Work in -20°C low temperature environment
- 7 colors LED
- NFC optional
- lithium battery for longer endurance

2.66"

# Rock Series ESL



- Super tough crash-proof protective cover for the display
- 7 colors LED
- NFC
- Self-replaceable universal battery

3.5"

4.2"

5.83"

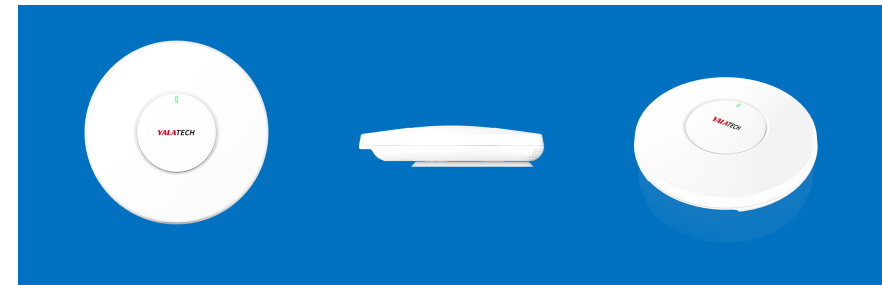
10.2"

# ESL Gateway (Access Point)

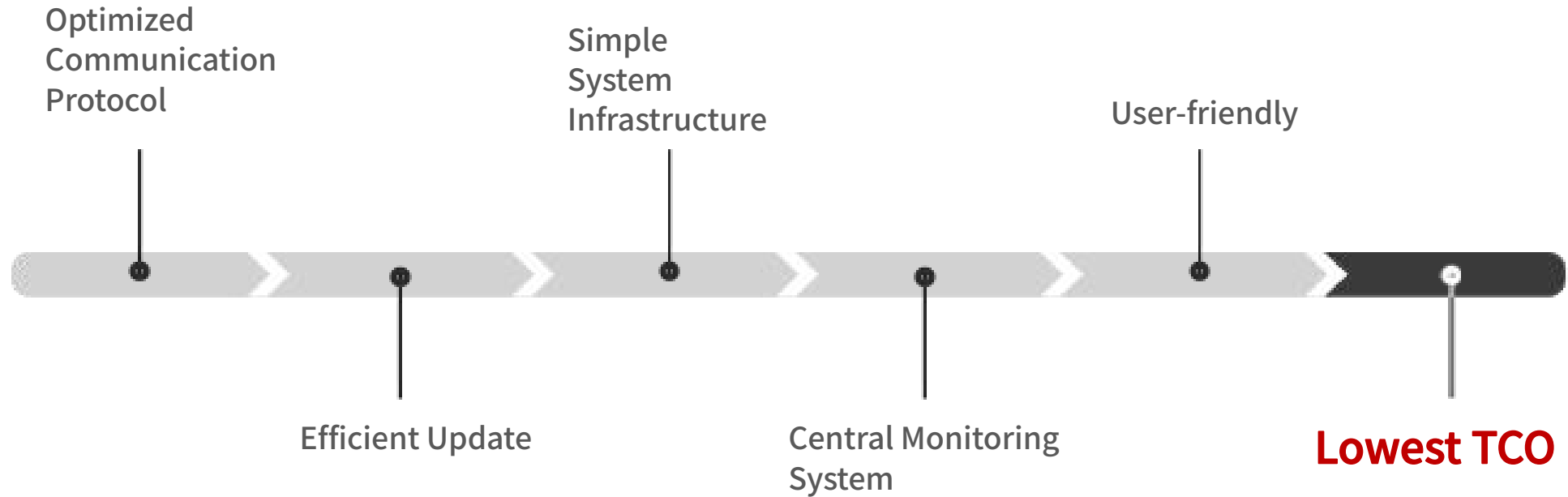


## Features

- Communicate to ESL units automatically in the initial setting
- High-speed bi-directional communication
- Simple installation, plug & play
- High capacity and wide coverage



# What Makes Our Solution Superior?



All the points above are the reasons why our ESL solution would be the best value-for-money solution you can ever expect.

# 1. Optimized Communication Protocol

Our communication protocol is the foundation to ensure efficient and stable communication between base stations and ESLs.

YalaTech has developed its own protocol based on Zigbee at 2.4G frequency band.

To ensure efficient and stable transmission, our communication protocol adopts the following technologies:

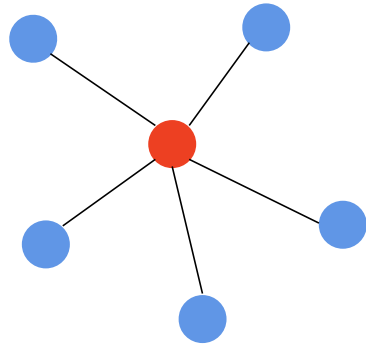
- Ad hoc networking
- Broadcasting
- Roaming
- Automatic channel selection

# Optimized Communication Protocol

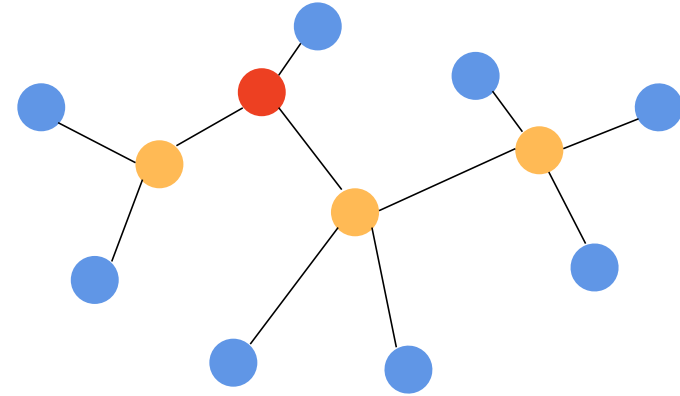
## Features:

- High-speed bi-directional communication between ESL and Gateway
- With automatic networking technology, ESL has the ability to automatically search for gateway
- High capacity and wide coverage
- Private communication protocol to ensure no interference and communication security

# AUTO NETWORKING



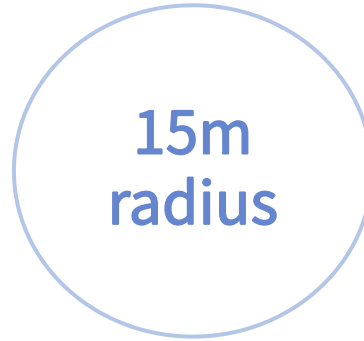
Small store with  
one AP



Supermarket with  
multiple AP

Intelligent self-organizing network technology, digital labels can automatically search for AP. When the previous binding AP fails, the digital labels will automatically match the new AP to ensure stable operation.

## Coverage of AP(base station)



With one AP only, the coverage is more than 800 m<sup>2</sup>

\* Coverage: Indoor 15m radius, 800 sqm coverage

\* No. of ESL per base station(AP): 2000

Theoretically, there is no limit to the number of ESL devices that one base station can access. However, in an indoor environment like a supermarket, due to the physical barriers of the walls and pillars, and considering the influence of the number of access on the price tag change speed, we have verified many times and tested it out that when the number of ESL tags is around 2000, the base station can exert excellent performance.



## 2. Efficient Updating Speed

Featuring the innovative “rapid mode”, up to 10,000 price tags can be updated in 25 minutes.

### How Do We Achieve This?

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millisecond-  
response

active  
dispatch

compressed  
data  
transmission

multi-  
channel

# Faster refresh speed with shorter response time



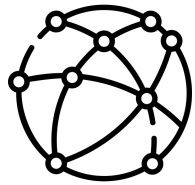
### 3. Simple System Infrastructure

Our ESL solution uses a simple infrastructure, the system provides the lowest cost installation and maintenance using the least amount of hardware in-store of any vendor.



## 4. Central Monitoring System

Centrally monitor the operating status of each store's system. This system also allows user to send and receive system reports and warnings regularly in real-time.



Multi-store  
Monitoring



Operation  
Monitoring



Gateway  
Monitoring



ESL  
Monitoring

## 5. User-friendly

YalaTech's ESL software is super user-friendly, reduce your training costs and improve operational efficiency



(1). One software to manage all.

(2). An ordinary user who does not understand IT can master our ESL software within 2 hours, and the cost of training is low.

(3). Users don't need to write code to create a template. Anyone who can use office can use our software to create a template.

For some competitors' ESL software, you need to write code to create a template, which increases the difficulty of users' operations.

# ESL SOFTWARE

For both cloud or local server;

With both web application for PC and APP for PDA.



# ESL software functions

## 1)Store management

The system supports functions such as adding, modifying, viewing, enabling and disabling.

## 2)User management

The system supports functions such as viewing, modifying and deleting; it can also assign stores and give permissions to users.

## 3)Commodity management

Users can view, add, modify, delete commodities in the system; also bind or unbind price label according to commodity number.

## 4)Device management

The system supports importing data or deleting data, binding or unbinding labels with commodities, and refreshing label screen.

## 5)Data statistics

The system supports viewing the updated records and historical price changes, as well as the updated records and historical price.

## 6)Early-warning Monitor

The system can monitor AP and ESL, and abnormal data will be sent to designated personnel.

# ESL software features

- Support cloud and local server deployment;
- With Free and Open API for System Integration and Secondary Development;
- APP used for PDA to manage ESL, manage product, manage price, query product and ESL;
- Visual template editor for easy template creation;
- The template editor allows personalized editing and typesetting of graphics, images, text, number and QR code.



# Template Editor / What you see is what you get

Cancel Preview Reset Save

General Control

Rectangle Rounded Round QR  
rectangle Code

Graphic Photo Images Upload  
Barcode Barcode Line Upload  
Video



Dynamic Data

Empty Text Charge unit

Production Date

Ingredients

Production Time

Storage Condition

Attributes(Retail price) Layer

Content {Retail price}

Font Selection Microsoft Yahei

Font Size 22 px

Text Spacing 0 px

Font Color

Font Location

Price setting

Background Color

# Template(display format)



Number, letter, picture, currency symbol, punctuation mark, bar code, and QR code. Up to 10 of these can be displayed on the screen.

The template editor allows personalized editing and typesetting of graphics, images, text, number and QR code;

# Split screen feature

Our ESL has a feature where you can display price vertically, upside down, and can be split into multiple small screens where you can display price of different products on one tag/label.



Greatly improve the screen utilization rate of the price tag and reduce the cost of use



# System integration

Equipped with standard API that is compatible with any ERP or POS systems that allows you to manage your in-store price through your current system after integration with our digital label system.

Hardware integration is available for customers who hope to integrate their server with ESL gateway.

## 1. API

Our software has standard API with http and https protocol interface.

## 2. Database Storage

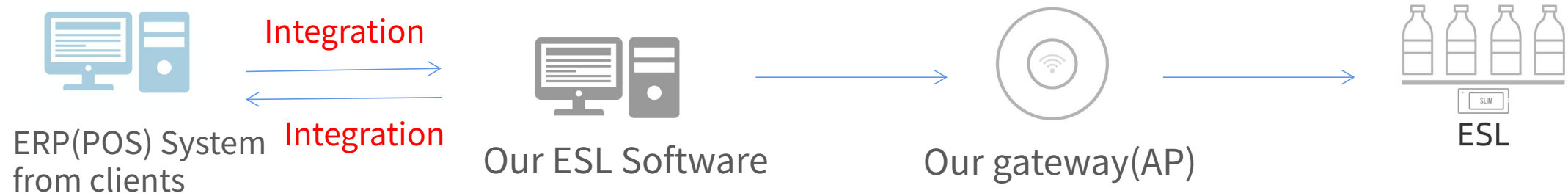
Database integration to allow user to view the data.

## 3. MQTT Protocol

Hardware integration that allows images to be sent to the gateway through MQTT protocol.

This method allows the gateway to be directly connected to your server and your server can run without using our back-end portal.

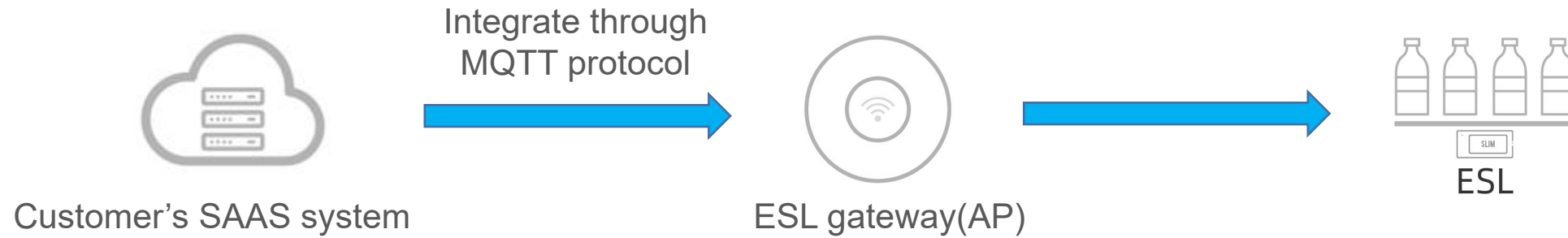
# How to connect your ERP with ESL software?



## Software integration

We provide free API for easy integration, user can manage the content of the digital label through their ERP or POS after integration.

# If you hope to use your own ESL software



## MQTT integration

The base station has open interface and can realize system integration with retail solution provider's SAAS system through the MQTT protocol.

MQTT protocol document and dedicated tech support team is available for the system integration.



YALATECH SAAS



PRIVATE CLOUD



LOCAL SERVER



CENTRAL SERVER

YalaTech ESL system can be deployed to your private cloud server,  
local server (individual store) and central server (chain stores).



To learn about how our Electronic Shelf Label solution can help your business, just contact us from below.

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